

REMARKS

This Amendment is filed in response to the Office Action mailed Oct. 31, 2007. The Applicant respectfully requests reconsideration of the rejections presented therein.

Claims 1-34 are pending in the case.

Claim 34 has been amended to correct a typographical error.

Claim Objections

At paragraph 2 of the Office Action, claim 34 was objected to as a duplicate of claim 2. The Applicant notes that claim 34 was inadvertently made dependent from claim 1, while it was intended to be dependent from claim 33. The Applicant thanks the Examiner for bringing this typographical error to their attention. Claim 34 is now amended to depend from claim 33.

Claim Rejection - 35 U.S.C. §103

At paragraphs 3-4 of the Office Action, claims 1, 3-4, 6, 11-14-17, 22-24, 27, 29-30 and 32 were rejected under 35 U.S.C. §103(a) as obvious over Varghese et al., U.S. Patent No. 6,560,236 (hereinafter “Varghese”), in view of Owaga et al., International Application Number WO 01/26303, machine translated from Japanese to English (hereinafter “Owaga”).

The Applicant’s claim 1, representative in part of the other rejected claims, sets forth (emphasis added):

1. A method for use by an intermediate network device having a plurality of interfaces for forwarding network packets among the interfaces, one or more of the interfaces being associated with one or more Virtual Local Area Network (VLAN) designations, the method comprising the steps of:
mapping each VLAN designation to a site identifier;
receiving on an inbound interface a packet having a site-local unicast destination address;
identifying the VLAN designation associated with the received packet;

utilizing the identified VLAN designation to retrieve the site identifier to which the VLAN designation is mapped;

creating a modified destination address by embedding the retrieved site identifier into the site-local unicast destination address; and
rendering a forwarding decision for the received packet based on the modified destination address.

Varghese discusses a technique for dividing a large LAN into a number of virtual LANs (VLANs). In one example, Varghese discloses a bridge (*see* Fig. 2, 112) having two link (*see* Fig. 2, 114(1)) associated with a first VLAN, and two links (*see* Fig 2, 114(2)) associated with a second VLAN. *See* col. 4, lines 59-64. To configure such an arrangement, a user assigns the ports connected to the links associated with the first VLAN (*see* Fig. 4, ports 8, 12) a first VlanId, and the ports connected to the links associated with the second VLAN (*see* Fig. 4, ports 9, 15) a second VlanId. *See* col. 4, line 65 to col. 5, line 6. “[T]he VlanId field identifies the VLAN....” *See* col. 6, line 45.

Ogawa discusses a technique for allowing IPv4 networks to operate within an IPv6 environment. Ogawa describes that the conventional IPv6 address format includes a “SLAID (Site Level Aggregation Identifier)” portion. *See* page 3, lines 57-59. In one implementation, a routing table is updated to show that an IPv4 address associated with particular SLAID is directly accessible from a router. *See* page 10, lines 35-40. When a packet is received from the IPv4 network on a particular interface of the router, a routing table entry is created. *See* page 10, lines 41-41. Thereafter, this routing information may be propagated to other routers. *See* page 10, lines 51-59.

First, the Applicant respectfully urges that neither reference suggests the claimed ***“mapping each VLAN designation to a site identifier”*** Specifically, neither reference discloses an identifier akin to the claimed *site identifier* and thus mapping VLAN designations thereto is not disclosed.

The Applicant’s *site identifier* relates to the IPv6 concept of **sites**. The Applicant respectfully directs the Examiner’s attention to page 4, lines 7-14 of the specification which state (emphasis added):

IPv6 also defines two types of local use or scoped unicast addresses: link-local unicast addresses and site-local unicast addresses. In contrast to the Aggregatable Global Unicast Addresses described above, link-local and site-local addresses are not globally unique. Instead, link-local addresses are unique only on a single link, while site-local addresses are unique only within a given site. Link-local addresses were developed to support auto-configuration, while site-local addresses were developed, at least in part, to allow computer networks that are not connected to the global Internet to nonetheless use IPv6 address schemes. *A site, which is not rigorously defined in IPv6, is typically intended to cover a region of topology that belongs to a single organization and that is located within a particular geographic location.* A link typically refers to a LAN or a bridged network.

The Office Action first suggests that “*mapping each VLAN designation to a site identifier*” “is shown by Varghese’s naming VLANs with VlanIds, apparently likening a site ID to a VLAN ID. The Applicant respectfully urges such likening is inappropriate. A VLAN ID is well known to numerically identify a particular virtual LAN. In contrast site ID does not identify a virtual LAN, but rather a particular site. Indeed the Applicant discusses both VLAN IDs and site IDs in the specification (for example mapping them to each other in the Site Table 424 of Fig. 4). Thus they are clearly quite distinct.

The Office Action further suggests that “*mapping each VLAN designation to a site identifier*” is shown by Ogawa’s assigning a Site-Level Aggregation Identifier (SLAID) to an interface. A Site-Level Aggregation Identifier (SLAID) is simply a portion of a destination address used to identify subnets. The Applicant’s claimed site ID is quite distinct from a SLAID. Indeed the Applicant specifically shows both fields as separate and distinct in specification Fig. 7. *See* specification Fig 7, Site ID 704 and SLA 708. This a SLAID and a site ID are quite different.

Further, even if agreement cannot be reached that site ID is quite different from a SLAID, it is unclear how Ogawa can be interpreted as teaching *mapping each VLAN designation to a site identifier*. Ogawa makes no mention of VLANs. Thus at most taught maps SLAIDs to an interface, not to a VLAN designation.

Accordingly, the Applicant respectfully urges that Varghese and Owega are legally insufficient to make obvious the present claims under 35 U.S.C. §103 because of the absence of the Applicant's claimed "*mapping each VLAN designation to a site identifier.*"

Second, neither reference discloses the claimed "*receiving on an inbound a packet having a site-local unicast destination address*" and "*creating a modified destination address by embedding the retrieved site identifier into the site-local unicast destination address.*" There appears to be agreement these features are not shown by Varghese. See Office Action page 6, 2nd paragraph. However, the Office Action suggests they are shown by Ogawa. The Applicant respectfully requests reconsideration.

A site-local unicast destination address refers to a particular type of scoped unicast address. The Applicant respectfully directs the Examiners attention to the specification at page 4, lines 7-11 which states (emphasis added):

IPv6 also defines two types of local use or scoped unicast addresses: link-local unicast addresses and site-local unicast addresses. In contrast to the Aggregatable Global Unicast Addresses described above, link-local and site-local addresses are not globally unique. Instead, link-local addresses are unique only on a single link, while site-local addresses are unique only within a given site.

Ogawa makes no mention of receiving or modifying packets whose destination address is not globally unique, but rather unique only within a particular site. The Office Action points to page 10, lines 35-40 of Ogawa. However, page 10, lines 35-40 of Ogawa simply describes creating a "Direct" entry in a routing table. Ogawa's "Direct" routing table entry is an indication that a "network can be reached directly from [the] Router B," as opposed to there being intermediate routers that must be passed through to reach the network. Thus, rather than indicating a scope of uniqueness of a destination, a "Direct" routing table is simply a description of the network topology.

Accordingly, the Applicant respectfully urges that Varghese and Owega are legally insufficient to make obvious the present claims under 35 U.S.C. §103 because of

the absence of the Applicant's claimed "*receiving on an inbound interface a packet having a site-local unicast destination address*" and "*creating a modified destination address by embedding the retrieved site identifier into the site-local unicast destination address.*"

At paragraph 5 of the Office Action, claims 2, 20, 21, 25, 26 and 32 rejected under 35 U.S.C. §103(a) over Varghese, in view of Ogawa, in further view of Flanders et al., U.S. Patent No. 6,172,980 (hereinafter Flanders).

Claims 2, 20, 21, 25, 26 and 32 are dependent claims that depend from claims believed to be allowable for the reasons discussed above. Claims 2, 20, 21, 25, 26 and 32 are also believed to be allowable at least due to such dependency, as well as for other reasons.

At paragraph 6 of the Office Action, claims 7-9 and 18 rejected under 35 U.S.C. §103(a) over Varghese, in view of Chang et al., U.S. Patent No. 6,728,249 (hereinafter Chang).

The Applicant respectfully notes that the rejection makes no mention of Owaga, despite the fact that claims 7-9 and 18 are dependent claims that depend from claims rejected over a combination including Owaga. Indeed, it appears the basis for this rejection is not consistent with the Examiner's interpretations that Varghese alone does not show several aspects of the independent claims. Accordingly, the Applicant respectfully requests clarification.

At paragraphs 7 of the Office Action, claim 19 was rejected under 35 U.S.C. §103(a) Varghese, in view of Chang, in view of Muller et al., U.S. Patent No. 5,938,736 (hereinafter Muller).

The Applicant respectfully notes that the rejection makes no mention of Ogawa, despite the fact that claim 19 is a dependent claim that depends from claims rejected over

a combination including Owaga. Accordingly, the Applicant respectfully requests clarification.

In the event that the Examiner deems personal contact desirable in disposition of this case, the Examiner is encouraged to call the undersigned attorney at (617) 951-2500.

All independent claims are believed to be in condition for allowance.

All dependent claims are believed to be dependent from allowable independent claims.

The Applicant respectfully solicits favorable action.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,

/James A. Blanchette/
James A. Blanchette
Reg. No. 51,477
CESARI AND MCKENNA, LLP
88 Black Falcon Avenue
Boston, MA 02210-2414
(617) 951-2500